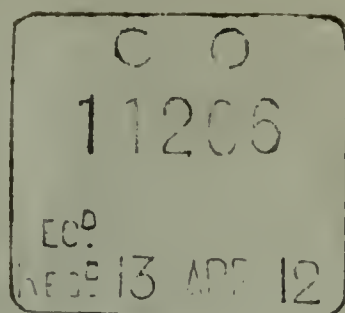


10 July 1912



CEYLON.



ADMINISTRATION REPORTS, 1910-11.

PART IV. — EDUCATION, SCIENCE, AND ART.

MEDICAL.

REPORT OF SIR ALLAN PERRY, M.D.,

*Principal Civil Medical Officer and
Inspector-General of Hospitals.*

MEDICAL.



REPORT OF THE PRINCIPAL CIVIL MEDICAL OFFICER AND
INSPECTOR-GENERAL OF HOSPITALS FOR 1910-11.

I HAVE the honour to submit for the information of Government the Administration Report of the Medical Department for the eighteen months, January 1, 1910, to June 30, 1911.

SECTION I.—POPULATION : BIRTH- AND DEATH-RATES.

2. The population enumerated at the last Census (March, 1911) was 4,105,535, and consisted of 7,625 Europeans, 26,857 Burghers, 2,714,616 Sinhalese, 1,059,354 Tamils, 266,454 Moors, 13,089 Malays, and 17,540 Others, exclusive of the Military and Shipping ; compared with the population at the Census of 1901, there was an increase of 15·1 per cent. in the decade. The natural increase by excess of births over deaths from the date of the last Census to June 30, 1911, amounted to 10,636, while the number of Indian immigrants exceeded the number of emigrants by 8,169. The population estimated as on July 1, 1911, was accordingly 4,124,340, an increase of 127,676 persons, or 3·19 per cent., on the population at the end of 1909 estimated on the basis of the previous Census.

SECTION II.—PUBLIC HEALTH.

Vital Statistics.

3. I regret that the returns of deaths under their respective diseases are not available yet for the period covered by this Report ; but for the purpose of estimating the condition of the public health from the birth and death returns kindly furnished to me by the Registrar-General, it may be stated that the births registered during the eighteen months numbered 241,488, and were in the proportion of 39·6 per 1,000 of the population per annum estimated to the middle of the period. The deaths registered during the eighteen months numbered 171,194, and were equal to a rate of 28·0 per 1,000 of the population per annum. Compared with the year 1909, the birth-rate for the eighteen months 1910-11 shows an increase of 2·9 per 1,000, and the death-rate a decrease of 2·3 per 1,000 ; compared with the average rates for the twelve years 1898-1909, the birth-rate for the eighteen months shows an increase of 1·8, and the death-rate a decrease of ·5 per 1,000.

4. I submit herewith the number of deaths registered under their respective diseases for the year 1910 with those for the year 1909 for comparison :—

	1910.	1909.
Cerebro, including spinal fever ..	21,906	23,903
Simple continued fever ..		
Enteric fever ..		
Influenza ..		
Remittent fever ..		
Ague ..	18,730	22,932
Diarrhœa ..		
Dysentery ..		
Dyspepsia ..		
Enteritis ..		
Obstruction of bowel ..	6,810	9,453
Hernia ..		
Appendicitis ..		
Laryngitis ..		
Croup ..		
Bronchitis ..	3,917	4,195
Asthma ..		
Pneumonia ..		
Pleurisy, &c. ..		
Phthisis ..		
Diseases of nervous system ..	13,597	14,477
Tetanus ..	646	488
Circulatory system ..	618	755
Anchylostomiasis ..	1,592	1,486
Diabetes mellitus ..	139	182
Cancer ..	264	158
Parangi (yaws) ..	114	94
Leprosy ..	64	73
Hydrophobia ..	20	30
Cholera ..	22	8
Suicide ..	221	204
Snakebite ..	185	189

Of the above sixteen groups of diseases, it is satisfactory to note that nine groups show a fewer number of deaths in 1910 than in 1909. In the seven groups showing a larger number of deaths are tetanus, anchylostomiasis, cancer, parangi, hydrophobia, cholera, and suicide.

5. *Deaths due to Preventible Diseases.*—In 1910 the total number of deaths registered was 110,195, as against 122,970 in 1909; of the former number, 14,559 were deaths due to what one may call preventible diseases, and include such as enteric fever, phthisis, anchylostomiasis, puerperal fever, malaria, cholera, hydrophobia, &c. Under this heading, in my 1909 Report I stated there was no control over such preventible diseases as, among others, tuberculosis, anchylostomiasis, and hydrophobia. It is gratifying to be able to state that a Bill for the control of anchylostomiasis is now being considered; that a muzzling regulation for dogs has been introduced into Municipalities and most Local Board towns; and it is hoped that some legislation will be framed to render (a) the notification of phthisis compulsory, and (b) the highly dangerous carriers of that disease innocuous to the public.

6. *Infantile Mortality.*—The infant mortality in the thirty-one principal towns for 1910 was equal to a rate of 241·7 per 1,000 births, as against 257·7 in 1909.

7. *The Health on Estates.*—The mean birth-rate on estates for the four quarters of 1910 was 33·9 per 1,000, and the death-rate 35·9 per 1,000, compared with 36·6 and 39·6 respectively for 1909. The principal causes of death in 1910 were diarrhoea 2,788, dysentery 2,376, debility 2,108, pneumonia 1,335, anchylostomiasis 1,173, infantile convulsions 947, fevers 439, and phthisis 187. Out of these eight groups, the numbers were lower in six and higher in two; the phthisis rate was practically equal, viz., 188 in 1909 and 187 in 1910. The estate population was 420,340, based on the Census figures of 1901.

Principal Diseases.

8. *Malaria.*—The total number of persons treated for this disease in hospitals and dispensaries during the eighteen months was 877,841, an increase of 72,371 in proportion to the number treated in 1909, which may be accounted for by the occurrence of an unusually severe outbreak in parts of the Western, Sabaragamuwa, and Central Provinces after the break of the south-west monsoon of 1911 following a prolonged drought. In hospitals alone 15,493 cases were treated, of whom 664 died. During the period under review the Western Province had the greatest number of cases, next the North-Western, and then the Southern Province. The number of admissions into jails for this disease was 1,213, with 15 deaths. 140,592 ounces of quinine were issued from the Civil Medical Stores at a cost of Rs. 93,133. The amount of quinine expended during the eighteen months in comparison with 1909 was double. The special yearly report on malaria for 1910 was submitted under cover of my letter No. 936 of June 20, 1911, and for convenience I attach a copy:—

The work in connection with the prevention of mosquito-borne diseases in Ceylon during the year 1910 was on the lines followed in previous years, viz., general improvement in the sanitation of towns, the education of the public by lectures and pamphlets, and the free distribution of quinine. Malaria is the most frequent form in which a mosquito-borne disease is shown here; the other forms are absent, or so rare that they may be disregarded. The deaths from all fevers was ·52 per cent. of the population. The deaths from malaria alone in hospitals was 3·4 per cent. of the admissions for that disease.

As in the former years, no organized campaign against malaria in any particular town or district has been attempted, but a beginning in this direction has been made by His Excellency the Governor, who in May, 1910, nominated a Committee composed of the Hon. Mr. T. B. L. Moonemalle, Dr. A. J. Chalmers, and Dr. H. M. Fernando to submit a scheme for the prevention of malaria at Kurunegala in the North-Western Province. This town has a population of 8,000 persons, and covers an area of four square miles. The report was sent in in December, 1910; it estimates the cost for minor works at Rs. 9,100 a year.

On August 1, 1911, Government approved of Dr. S. T. Gunasekara as Superintendent in charge of the anti-malarial scheme at this town; he assumed duties on September 5.

I herewith submit the draft return suggested by Professor Ronald Ross, which accompanied his note No. 34,335 to the Advisory Committee on Tropical Research, dated November 8, 1910:—

Return of Malarial Fever, Blackwater Fever, Yellow Fever, Filariasis, and Dengue during the Year from January 1 to December 31, 1910.

1. Name of Colony	..	..	..	Ceylon
2. Total area	..	..	..	23,331½ square miles
3. Estimated population:—				
(a) Total	..	..	..	4,184,147*
(b) Europeans	..	..	..	6,656
(c) }				
(d) } Other races	..	..	..	4,177,491*
(e) }				
4. Births during the year:—				
Total births	..	..	..	157,453
5. Deaths during the year:—				
(a) Total deaths	..	..	..	110,195
(b) Deaths ascribed to fever	..	..	..	21,815
(c) Deaths ascribed to blackwater fever	..	..	..	} No deaths have been recorded from these causes
(d) Deaths ascribed to yellow fever	..	..	..
6. Government hospitals:—				
(a) Number of such hospitals	..	..	..	72
(b) Totals during year	..	{ Admissions ..	..	61,457
		{ Deaths ..	..	7,152
(c) Malarial fever	..	{ Admissions ..	..	7,288
		{ Deaths ..	..	249
(d) Blackwater fever	..	{ Admissions ..	..	Nil
		{ Deaths ..	..	Nil
(e) Yellow fever	..	{ Admissions ..	..	Nil
		{ Deaths ..	..	Nil
(f) Filarial diseases	..	{ Admissions ..	..	20
		{ Deaths ..	..	Nil
(g) Dengue	..	{ Admissions ..	..	Nil
		{ Deaths ..	..	Nil

* Inclusive of immigrant coolies.

7. Government dispensaries :—

(a) Number of such dispensaries	..	..	335
(b) Total attendances during year	..	..	1,619,532
(c) Attendances for malaria	..	..	508,302
(d) Attendances for filarial diseases	..	..	937
(e) Attendances for dengue	..	..	Nil

8. Medical Service :—

(a) Number of Government medical officers	..	276
(b) Number of special health officers	..	3
(c) Number of other registered medical practitioners	..	70

9. Schools :—

(a) Number of Government and State aided schools	..	2,656
(b) Number of scholars registered in these schools	..	298,977
(c) Average daily attendances	..	196,051

10. Estates employing unindentured labour :—

(a) Number of such	..	2,082
(b) Number of unindentured labourers employed	..	363,666
(c) Number of hospitals and dispensaries on such estates	..	239
(d) Total deaths among such labourers	..	12,726
(e) Total admissions and attendances at hospitals and dispensaries	..	173,832

11. Estimated revenue of Colony :—

Total during year	Rs. 38,124,800*
-------------------	----	----	-----------------

12. Estimated expenditure of Colony :—

(a) Total during year	..	Rs. 41,892,488
(b) Annual medical and sanitary expenditure	..	Rs. 2,606,087
(c) Upkeep of Government hospitals and dispensaries	..	Rs. 1,566,100
(d) Total salaries and allowances of medical officers	..	Rs. 882,390
(e) Total annual sanitary expenditure	..	Rs. 5,281

13. Towns under Municipalities or Town Councils :—

(a) Number of such	..	24
(b) Total population	..	434,653
(c) Total revenue	..	Rs. 3,065,413·79
(d) Total medical and sanitary expenditure	..	Rs. 496,942·54

14. Table of deaths by districts

15. Table of deaths in the principal towns

16. Rainfall during the year

17. Additional information to be given if possible on the following points :—

(a) Is there any legislation in force against the breeding of mosquitoes in premises ?	Numbers of notices, convictions, and warnings during the year	None
(b) Number of persons of the age of 15 examined for enlarged spleen		376,921
Where was this done ?	..	At the various hospitals, dispensaries, and schools
(c) Percentage affected	..	Spleen rate 19·85
Does Kala-azar exist ?	..	Kala-azar exists to a very slight extent
(c) Number of persons examined for filarial diseases	..	As only 23 persons were examined for filarial diseases, the percentage would be of no value
Where was this done ?	..	
Percentage affected	..	
(d) Any large works for surface drainage of towns or reclamation of marshes.	Approximate cost	None
(e) Number of men employed in towns and villages for petty anti-mosquito works.	Approximate cost	In only one town a small mosquito brigade was employed for petty anti-mosquito work
(f) Amount of Government quinine sold or distributed gratis during the year		1,236 lb. 8 oz.
Agencies employed	..	Chiefly through the headmen
(g) Is quinine distributed regularly in the schools ?	..	Yes, at 324 out of 731 Government schools
(h) Measures taken against these diseases on estates employing unindentured labour		Free quinine given and improvement in general sanitation in many estates
(i) Any steps taken regarding the housing of the poor	..	No
(j) Any exceptional increase or decrease of these diseases recently noticed		A general decrease in malaria has been recently noticed in the majority of the Provinces
(k) Any other remarks on the subject	..	Vide introductory remarks

The spleen census for the six months, January 1 to June 30, 1911, was obtained from a more carefully selected portion of the community, viz., male children attending schools, as against all children and young adults attending hospitals, dispensaries, and schools, which was the former practice :—

For all Provinces for the latter Half of 1910 (North-east Monsoon).

Number examined	..	..	..	179,837
Total enlargement	..	..	..	34,935
Spleen rate	..	..	..	19·43
Average spleen	..	..	..	1·71

* From the figures available at present it is anticipated that the actual revenue for the year 1910 will exceed the estimated revenue by Rs. 4,750,000.

For Five Provinces for the First Half of 1911 (South-west Monsoon).

Number examined	..	..	..	..	84,226
Total enlargement	..	..	..	..	12,728
Spleen rate	..	..	..	..	15.11
Average spleen	..	..	..	..	1.56

The result of these inquiries shows a smaller spleen rate and average spleen than that in 1909, which was :—

Number examined	..	..	..	..	317,694
Total enlargement	..	..	..	..	66,141
Spleen rate	..	..	..	..	20.81
Average spleen	..	..	..	..	1.75

9. *Cholera*.—The total number of cases of this disease treated during the eighteen months was 410, with 266 deaths. The larger number of these cases was in connection with a serious epidemic which occurred within the last three months of the period at the quarantine cooly camp at Ragama, where there were 327 cases, with 214 deaths; other small outbreaks occurred in the Western, Central, North-Western, Uva, and Sabaragamuwa Provinces. In nearly every instance the original source of infection could be traced to South India.

The Outbreak at Ragama.—On May 3, 1911, a case of cholera occurred in a cooly who had arrived on April 29 from an infected area in India; on May 5 4 other cases occurred, 2 from contacts of the first case and 2 from among the arrivals of May 1 and 2; on May 6 9 cases occurred among the arrivals of April 30 and May 3 and 5; there were then about 3,000 coolies in the camp, but further arrivals continued to be received up to May 9. The disease spread rapidly throughout the various camps, and after a small stampede, in which the coolies in the various camps became mixed, there was no possibility of keeping the divisions separate, and it was recognized that the whole number had to be considered as “infected.” The rapid spread of the epidemic was accounted for as due to three possible agencies :—water, food, and flies. The water tanks were not fly-proof, the food was cooked on the ground, and there was a plague of flies.

The tanks were disinfected and made fly-proof; subsequent bacteriological examination proved that the wells and tanks were free from the cholera vibrios. It is probable, therefore, that the vehicle of dissemination was food or flies, or both. The food was cooked on the ground, and the ground was seriously contaminated with deposits of human excreta, much of which was cholera-infected, and, as I have remarked above, there was a plague of flies.

There were 327 coolies attacked, of whom 214 died. All the dead were cremated.

The health of the coolies rapidly improved when the new camp on another site was ready for their reception: the first batch of removals was made on May 24; after that date only 20 cases occurred in the new camp.

The last batch of healthy coolies left Ragama for their estates on June 19.

Before and during the epidemic an unprecedented drought occurred; the camp wells ran dry, and water had to be brought from Colombo, eight miles by railway. This shortage of water and an insufficiency of latrine and scavenging coolies favoured the spread of the epidemic.

I have great pleasure in placing on record the magnificent work performed by the medical officers, apothecaries, sanitary inspectors, two religious sisters, and the attendants and coolies who were employed by this Department throughout this serious epidemic. No words can convey their devotion, unselfishness, and nobleness of conduct. To their efforts is due the wonderful result achieved—the epidemic was controlled in a little over three weeks, and considering that at one time it was estimated that there were 4,000 coolies in the camp, that they were panic-stricken, that the water supply for a large part of the period was insufficient, that the sanitary force was totally inadequate and could not be strengthened, it is marvellous that only 327 coolies were attacked, and that the death-rate among them was only 65.4 per cent.

Cholera at Ratnapura.—The history of cholera during the eighteen months from January 1, 1910, to June 30, 1911, would not be complete without mentioning an outbreak that occurred at Ratnapura. A cooly arrived on Nivitigala estate on June 18 from Tataparai in India; he was attacked with the disease on the 19th idem. A second case occurred in a cooly who arrived on the 22nd idem. Seven cases developed subsequently among old resident coolies on this estate. Owing to the drought the inhabitants of Ratnapura were forced to use water from the river, which was badly smelling, and which it is assumed was polluted from the washings of the above-mentioned estate, as there was some rain during the latter part of June. The first case in the town was on July 2: 7 cases were reported, with 6 deaths. On July 9 a cooly was attacked on Rambukkande estate; he arrived from India on June 23. There were cases that developed in the jail, in the hospital, and in villages as far as eight miles away. The total number of those attacked was 49, of whom 31 died. The last case was on August 11.

10. *Smallpox*.—There were 356 cases treated, with 62 deaths, during the eighteen months' period, which figures are in nearly the same proportion to those published for the year 1909. Every Province (except the North-Central) returned cases; the Western and Central Provinces were seriously affected, with 154 and 159 respectively; Kandy and its surrounding villages suffered most. The original source of infection in many cases was traced to Southern India, but in all probability some cases were connected with the 1909 outbreak. Out of the 154 cases in the Western Province, 105 were treated at the Infectious Diseases Hospital, Colombo. The total number of deaths in which previous vaccination was absent was 37. The epidemic at Kandy lasted from March 2, 1911, to the end of October last.

11. *Enteric Fever*.—816 cases were treated in 40 out of the 75 hospitals of the Island; 69 per cent. of the total cases were in Government hospitals in Colombo (not including the Jail and Municipal hospitals). There were 171 deaths, a mortality-rate of 20.9 per cent. The death-rate in Colombo hospitals was 17.5 nearly; there were 40 cases treated in the Kandy hospital, with 14 deaths; 18 cases, with 2 deaths, at Galle; 17 cases and 4 deaths at Kalmunai; 13 cases and 1 death at Dikoya; 17 cases, with 5 deaths, at Nawalapitiya. In the 18 hospitals attached to jails there were 18 cases, with 6 deaths. The Medical Officer of Health for the suburbs of Colombo reports that the notification of cases of enteric fever is very unsatisfactorily carried out in the villages; notwithstanding, 264 cases were reported to

him from between January 1, 1910, and June 30, 1911, and every one was seen by him. Pamphlets were left in all the infected houses with directions as to the precautions to be taken to prevent the spread of the disease. Disinfection of premises was carried out and free disinfectants issued to the poor. It is ominous that the village most affected was Kirillapone, which immediately adjoins Narahenpitiya (the Colombo night soil dépôt), and that the fly pest was so great at Kirillapone and Wellawatta that "bakers could not knead their dough in the daytime, and had to do it after nightfall."

12. *Dysentery*.—This disease is rife in all parts of Ceylon. 3,710 cases were treated in the various Government hospitals, with 1,094 deaths. It is very common in the planting districts and in Colombo. In the former the water supplies are, as a rule, indifferent as to quality and liable to pollution; in Colombo this same cause is found with those who use shallow, unprotected wells. But Colombo contains a large number of vagrants, who, as a class, easily contract this disease. 20·53 of the total treated were in Colombo hospitals.

There were 18 cases, with 6 deaths, in jail hospitals. Most of these cases occurred at the Mahara and Mutwal jails.

Dysentery and diarrhoea are the commonest diseases in our jails. 4,944 admissions were recorded in jail hospitals for the eighteen months' period, with 196 deaths (3·96 per cent. mortality). In the Colombo jail hospital alone 1,347 cases were treated, with 69 deaths (5·1 mortality).

13. *Leprosy*.—628 cases of leprosy were treated in the Government medical institutions during the period under review, with a mortality of 63. The present accommodation for lepers is quite inadequate.

The question of a leper colony in the Eastern Province is still under consideration. There are many lepers at large, who are a source of danger to the public. Until they can be all isolated in a proper institution it will be impossible to stamp out this disease. At Hendala asylum I strongly recommend that religious sisters should be employed as nurses.

14. *Anchylostomiasis*.—It is gratifying to record that this disease has received consideration since the publication of my last Administration Report; as a result of the Report of a Committee appointed in 1910 to consider this question, the attention of planters and others has been directed to it, and a draft enactment is now under consideration. The recommendations of the Committee above mentioned are:—

- (1) That all superintendents of estates should treat new arrivals with beta-naphthol, followed by tonics.
- (2) Where it is known that anchylostomiasis already prevails on estates, superintendents should treat the whole labour force in convenient batches in a similar manner.
- (3) The drugs required for the treatment should be issued at cost price from the Civil Medical Stores; where estates have dispensaries, we recommend that the drugs required for beta-naphthol treatment may be used for Sinhalese as well as Tamil labourers.
- (4) Medical officers in charge of districts should report to the Principal Civil Medical Officer, through their immediate superiors, the prevalence of anchylostomiasis in a severe form on any estate. In such cases the Principal Civil Medical Officer should be empowered to send an officer to inspect, report, and make recommendations for combating the disease. If the Principal Civil Medical Officer approve these recommendations, they should be communicated to the superintendent with a view to their adoption. Where these recommendations have not been carried out, Government shall be empowered to enforce the Principal Civil Medical Officer's recommendations at the expense of the estate.
- (5) With regard to the question of the improvement of sanitation on estates, we recommend that every set of lines and its immediate surroundings should be cleaned and swept once every day. All sweepings should be burnt or buried. At least 12 feet clear of all vegetation must be maintained round the lines. Stone, brick rendered in cement, or cement concrete drains should be constructed to carry off rain from the roofs and from the immediate vicinity of the lines. The immediate vicinity of the lines should be on a lower level than the floor of the lines and slope downwards from them, with the object of keeping the ground surrounding the lines as dry as possible, as the hook-worm flourishes in damp earth. All excreta deposited within 50 feet of the lines should be removed daily and buried by the sweeper.
- (6) At all bathing-places, whether at spouts, wells, or riverside, they should be stone or paved platforms with a properly constructed run-off drain where necessary. Wells for bathing and wells for drinking water should be kept separate.
- (7) To prevent contamination of the water supply for drinking purposes, closed iron piping is strongly recommended. Wells should be lined with brick pointed with cement and have parapet walls, and a surrounding platform 4 feet wide of stone paving, cement concrete, or brick cement rendered, and a surrounding drain to conduct the waste water away. Wells for domestic and drinking purposes should be covered and provided with a pump.
- (8) We would urge on all employés of labour the desirability of establishing latrines, especially for bungalow coolies, factory coolies, school children, and Public Works Department lines.
- (9) The agents, visiting agents, and managers of estates should be requested to do all in their power to give effect to the above recommendations.

I would here repeat the figures showing the deaths from this disease. The Registrar-General gives the total deaths from anchylostomiasis for the whole Island for 1910 as 1,592, of which 1,173 were deaths on estates; this leaves only 419 deaths from this disease for the rest of Ceylon's population, which is significant, and points to the necessity of taking active measures to prevent insanitary conditions on those estates that favour the propagation of this disease.

Many planters have improved the conditions under which their labour force live, and have carried out sanitary improvements and medical treatment without waiting to be made to do so by law, with excellent results as to improved health among the labourers and a more efficient force.

15. *Diphtheria*.—This disease is becoming more frequent, or its symptoms are more easily recognized by medical men. In the General Hospital and the Infectious Diseases Hospital, Colombo, there were 12 cases treated, with 1 death.

16. *Chickenpox*.—8,151 cases of this mild affection were treated, with only 2 deaths.

17. *Parangi or Yaws*.—4,777 cases of this disease were treated at the various medical institutions during the eighteen months ended June 30, 1911. This number is less in proportion than the figure 3,485 given for the year 1909 ; the deaths for that year numbered 18, and for the eighteen months' period 40. As one of the results of the Durbar held at Kandy in July, 1910, the question of compulsory treatment of parangi patients was considered by His Excellency the Governor in Executive Council, and it was decided in October, 1910, that an experiment be made in a selected village or group of villages in order that the improvement which may be effected by providing a sufficient water supply and wholesome food should be observed. The village of Timbirigaswewa, in Tamankaduwa, about one mile from Habarana, was selected by the Government Agent, North-Central Province, in February, 1911, for the proposed experiment. The Provincial Surgeon visited this village and submitted a report on April 19, in which he said the village was a suitable one, but that it was very insanitary, the houses were filthy and ill-ventilated, water supply inadequate and precarious. He recommended clearing of the village, and brushwood to be cut down, &c.

The Principal Civil Medical Officer visited the village on July 11, and submitted a report to Government on 27th idem, pointing out that while the water supply was inadequate, the sanitary condition of the place had improved, the inhabitants looked fairly well nourished. The people present on the day of the visit numbered 60, mostly women and children ; the men were said to be away at work. Only 3 cases of parangi among adults and 3 among children were noticed, which small number did not appear to justify a further continuance of the experiment.

Since the issue of the last Administration Report of the Medical Department of this Colony, an epoch-making discovery in Chemotherapy has been given to the world by Professor Paul Erlich in his preparation called Salvarsan, or 606, which is a specific for all spirochetal and spirilla infections. Parangi as a spirochetal infection was discovered by Dr. Aldo Castellani.

The Salvarsan treatment of this disease has been tried in many countries, with uniformly good results ; in this country Dr. Castellani has treated a fair number of cases, and the results, after one injection of the new drug, is nothing short of marvellous. Time alone will prove if this curative effect will be lasting. If this much-to-be-desired result is attained, the yearly outcry for special parangi hospitals in various parts of this Colony will cease. For the purpose of putting this remedy to a more extended test, a medical officer with special knowledge of the treatment has been stationed at Anuradhapura to treat all suitable cases that may be admitted into that hospital.

18. *Cancer*.—Under this heading 264 deaths were registered in 1910, as against 158 in 1909. From these figures it cannot be said definitely that the disease is increasing in this country, because the attention of medical practitioners has been directed to the subject through many channels, notably through the reports published from time to time by the Cancer Research Fund, and these reminders may have influenced the correctness of diagnosis, which would increase the number of deaths certified.

Turning to the records of the hospitals, it is seen that the reports on the number of cases of cancer (*i.e.*, carcinomata and sarcoma together) in 1910 was the same as in 1909, namely, 121. The provincial distribution is as follows :—

				Sarcoma.		Carcinoma.
Central Province	..	..	..	—	..	7
Northern Province	..	..	..	—	..	10
Western Province	..	..	..	3	..	73
Southern Province	..	..	..	1	..	15
Eastern Province	..	..	..	1	..	6
Province of Uva	..	..	..	—	..	5
				5		116

Nil reports were received from the three other Provinces. Of the sarcomata, 2 were said to be melanotic, and the remaining 3 occurred in bone.

The carcinomata were distributed through the various parts and organs of the body, thus:—

				Females.		Males.		Total.
Cheek	..	..	..	9	..	26	..	35
Cervix	..	..	..	19	..	—	..	19
Penis	..	..	..	—	..	13	..	13
Breast	..	..	..	11	..	—	..	11
Tongue	..	..	..	3	..	6	..	9
Uterus	..	..	..	6	..	—	..	6
Lower jaw	..	..	..	1	..	7	..	8
Upper jaw	..	..	..	—	..	1	..	1
Lower lip	..	..	..	1	..	2	..	3
Upper lip	..	..	..	—	..	2	..	2
Hard palate	..	..	..	—	..	1	..	1
Larynx	..	..	..	—	..	1	..	1
Liver	..	..	..	1	..	1	..	2
Skin	..	..	..	—	..	1	..	1
Glands	..	..	..	—	..	1	..	1
Omentum	..	..	..	—	..	1	..	1
Pylorus	..	..	..	—	..	1	..	1
Rectum	..	..	..	1	..	—	..	1
				52		64		116

19. *Phthisis*.—In the Registrar-General's returns for 1910 3,917 are shown under the heading "Phthisis," as against 4,195 in the year 1909. During the eighteen months' period there were 1,652 cases reported from the hospitals. In these reports the notified cases registered at the Municipality are not included. For the hospital cases the following tables show the race and sex distribution in the Provinces and the race and age distribution in the sexes :—

Table I.—Race and Sex Table showing the Distribution in the Provinces.

Province.	Sinha- lese.		In- dians.		Tamils (Ceylon).		Moors.		Bur- ghers.		Malays.		Euro- peans.		Ben- galis.		Not stated.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Western ..	256	232	43	23	58	25	11	7	12	14	3	3	—	—	1	—	6	2	390	306	696
Central ..	45	16	78	27	8	1	7	1	1	—	—	—	—	—	—	—	2	—	141	45	186
Northern ..	3	1	3	1	17	14	—	—	—	—	—	—	—	—	—	—	—	—	85	16	101
Southern ..	54	39	2	2	1	2	5	1	1	—	1	—	—	—	—	—	—	—	64	44	108
Eastern ..	2	—	1	—	38	18	12	10	3	2	—	—	—	—	—	—	—	—	56	30	86
North-Western ..	112	37	41	9	1	—	3	—	1	—	1	—	—	—	—	—	—	—	159	46	205
North-Central ..	33	9	—	—	13	2	2	—	—	—	—	—	—	—	—	8	1	—	56	12	68
Uva ..	23	4	9	5	12	7	1	—	—	—	—	—	—	—	—	—	—	—	45	16	61
Sabaragamuwa ..	60	23	37	15	1	—	4	—	—	—	—	—	—	—	—	—	1	—	103	38	141
Racial Sex Totals ..	588	361	214	82	211	69	45	19	18	16	5	3	—	—	1	—	17	3	1,099	553	1,652
Racial Total ..	949		296		280		64		34		8		—		1		20		1,652		1,652
General Hospital, Co- lombo* ..	59	20	—	—	13	2	—	—	3	—	—	—	—	—	—	—	—	—	75	22	97

* These cases are included in the figures for Western Province.

Table II.—Race and Age Tables showing the Distribution in the Sexes.

	Sinha- lese.		In- dians.		Tamils (Ceylon).		Moors.		Bur- ghers.		Malays		Euro- peans.		Ben- galis.		Not stated.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
0—5 ..	7	10	2	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	10	11	21
6—10 ..	5	7	2	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	10	9	19
11—15 ..	5	18	7	6	4	1	—	—	—	—	—	—	—	—	—	—	—	—	16	25	41
16—20 ..	47	49	20	6	15	8	4	—	1	3	—	1	—	—	—	—	3	—	90	68	158
21—25 ..	71	50	27	17	26	9	5	5	3	2	1	—	—	—	—	—	2	2	135	85	220
26—30 ..	130	67	47	25	38	17	15	5	3	—	1	1	—	—	1	—	4	—	239	115	354
31—35 ..	69	33	20	11	26	8	6	3	—	2	2	1	—	—	—	—	—	1	123	59	182
36—40 ..	97	49	32	12	38	12	7	3	3	4	—	—	—	—	—	—	4	—	181	80	261
41—45 ..	37	22	15	2	20	4	2	1	2	1	—	—	—	—	—	—	—	—	76	30	106
46—50 ..	55	29	18	1	16	5	4	1	2	2	1	—	—	—	—	—	1	—	97	38	135
51—60 ..	46	17	18	—	17	2	1	—	—	2	—	—	—	—	—	—	2	—	84	21	105
61—70 ..	12	7	3	—	6	1	—	1	4	—	—	—	—	—	—	—	—	—	25	9	34
71—80 ..	7	3	3	—	6	1	—	1	4	—	—	—	—	—	—	—	1	—	13	4	17
81—90 ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
91 and over ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Racial Sex Totals ..	588	361	214	82	211	69	45	19	18	16	5	3	—	—	1	—	17	3	1,099	553	1,652
Racial Total ..	949		296		280		64		34		8		—		1		20		1,652		1,652

On February 1, 1910, His Excellency the Governor was pleased to appoint a Commission " to inquire into and report upon the prevalence and alleged increase of tuberculous diseases in the Island, and upon the most effective measures for checking the dissemination of the said disease." The Commissioners were the Hon. Mr. L. W. Booth, Messrs. P. Arunaachalam, H. M. Maean Marcar, Drs. W. G. van Dort and H. M. Fernando, and Messrs. S. Seneviratne, James Peiris, and J. V. G. Jayawardena, under the Chairmanship of the Principal Civil Medical Officer. Mr. H. K. Hillyer was appointed Secretary of the Commission. The Commission held six meetings, the first of which was on February 11, 1910, and the last on June 6, 1910. A large amount of evidence was recorded, and the report was issued on the latter date, and is published in Sessional Paper XIX. of 1910.

In October, 1910, a general public meeting was held under the Chairmanship of His Excellency the Governor to consider if any steps should be taken to raise a memorial to His late Majesty King Edward VII., at which a Committee was formed and instructed to submit at a later date the most suitable form the memorial should take. At this subsequent meeting it was unanimously resolved that a fund should be publicly subscribed, to be known as " The King Edward VII. Anti-tuberculosis Fund." Mr. H. K. Hillyer was appointed Honorary Secretary, and Mr. D. Dunbar, Honorary Treasurer, with a large Committee representing all communities, under the Chairmanship of the Colonial Secretary. A Ladies' Committee was formed with Lady Hutehinson as Chairman, who on leaving the Island was succeeded by Lady Clifford.

A munificent donation of £10,000 had been given to Government by the Hon. Mr. J. N. Campbell of Ceylon some months previously for the purpose of fighting tuberculosis.

The public subscriptions so far collected amount to the sum of Rs. 150,000, which, with Mr. Campbell's generous gift, makes Rs. 300,000. Mr. A. E. de Silva has given a large piece of land near Colombo which is suitable for a sanatorium, and it is hoped that this institution with a tuberculosis dispensary (largely contributed by Mr. A. J. R. de Soysa) and a hospital for chronic cases of phthisis in Colombo will be established at no distant date.

The education of the public in the question of tuberculosis and how to prevent it has been attempted by means of illustrated handbills with letterpress in the vernaculars, and the Principal Civil Medical Officer has given popular lectures on the subject, illustrated by lantern views, at many towns between Jaffna and Galle.

One of the most important measures taken against this disease has been the regulation made by the Chairman of the Colombo Municipality, namely, the compulsory notification of cases of phthisis within the Municipal limits.

20. *Vaccination.*—During the period under review 251,500 subjects were vaccinated, of which 209,160 were primary vaccinations and 42,340 re-vaccinations. Of the former, 185,296 were successful and 9,871 unsuccessful; in 13,993 subjects the results of the vaccination was not known.

The percentage of successful cases to the total inspected was 95.45. For re-vaccination cases 19,585 were successful and 8,258 unsuccessful; in 14,497 the results were not known. The percentage of success in the re-vaccinated was 70.34. The number vaccinated in the eighteen months' period are larger actually, and relatively, to the figures of 1909. The successes are much higher in primary vaccinations, but less good in the re-vaccination returns. The quality of the lymph has been greatly improved; bacteriological examination at the time of collection showed the number of extraneous micro-organisms to be normal.

The buildings and equipment of the establishment have been much improved by the addition of a new office, operating room, and lavatory, by new stalls, and the fly-proofing of the rooms and stables.

The calves were not always of good quality and physique, and owing to the large amount of smallpox in parts of the Island the number necessary could not always be obtained. This difficulty was got over by the foresight of the officer in charge, who had a good supply of lymph in cold storage. 515 calves were employed for the manufacture of lymph, and 104,249 tubes of lymph were issued from the establishment.

21. *Precautions taken against the Introduction of Infectious Diseases.*—During the eighteen months' period the medical staff at the port consisted of the Port Surgeon and three assistants. The total number of vessels calling at Colombo was 4,597 steamers and 633 Indian and native sailing vessels.

The following ports were declared infected:—Bombay, Calcutta, Rangoon, Burma, Karachchi, Tuticorin, Mangalore, Madras, Calicut, Tellicherry, Bangkok, Batavia, Sourabaya, Samarang, Mauritius, Port Said, Hong Kong, and Penang.

The number of vessels placed in strict quarantine was: for plague 4, smallpox 15, cholera 4. 1,899 vessels arrived from infected ports, and being "healthy" were permitted to work cargo as "healthy in quarantine."

No case of plague was brought to the port, but four steamers were placed in strict quarantine, having suspected cases of this disease on board, and subsequently allowed to work "healthy in quarantine," as the cases were proved not to be plague.

The prevalence of cholera and smallpox in the south of India gave rise to much anxiety, because there is a large number of native passengers arriving here daily. Towards the end of 1910 Tuticorin, the principal port on the Indian side, became infected, and remained foul for many months.

The total number of estate coolies arriving at Colombo was 152,333, and 67,574 "miscellaneous deck passengers"; of the latter, 8,863 persons were vaccinated on arrival. The estate coolies showing no marks of vaccination or of smallpox are vaccinated at the cooly camp at Ragama. The Plague Committee held its periodical meetings.

22. *Lunacy.*—The total number of patients treated in the Colombo asylum during the eighteen months' period was 872 (males 542, females 330). The number discharged was 126 (males 80, females 46). The number of deaths was 98 (males 62, females 36). In the House of Observation 292 persons were treated (208 males and 84 females), of whom 149 (males 95, females 54) were transferred to the asylum and 122 (males 100, females 22) were discharged. The accommodation provided at the asylum is inadequate for the numbers treated. For details of this institution please see the report of the Medical Superintendent attached.

SECTION III.—METEOROLOGICAL CONDITIONS AND THEIR RELATIONSHIP TO DISEASE.

23. The rainfall map kindly supplied to me by the Surveyor-General for the eighteen months' period shows four areas that were comparatively dry, viz., the coast line from Kankasanturai to Mullaittivu in the north, the Mannar and Puttalam Districts in the west, the Hambantota District in the south, and a very small patch in the south-east of the centre of the Island.

As usual, more rain fell in the central and south-western parts of the Island than elsewhere, with three patches recording over 200 inches.

In former reports the influence of the two monsoons on malaria has been pointed out; outbreaks of this disease in the western half of the Island occurring after the first rains of the south-west monsoon, and a like result in the eastern half after the commencement of the north-east monsoon.

During the period under review severe malaria was experienced at the end of a long drought and after light showers, which is attributed to the preservation of malarial-bearing mosquitoes through the death of fish that feed on their larvæ.

Bowel diseases are more prevalent during the rains. Respiratory diseases are common during the chilly nights and mornings of the north-east monsoon.

Certain meteorological conditions further affect unfavourably the health of the people as regards the less quantity of food produced, and in consequence the lowered vitality to resist disease.

SECTION IV.—GENERAL SANITARY CONDITION OF THE COLONY AND OF THE CHIEF TOWNS.

24. The general sanitary condition of the Colony leaves much to be desired. Major sanitary works are very expensive, consequently improvements under this heading proceed slowly, the tendency is towards slow improvement, particularly in towns having a Municipality or Local Board and small places that are placed under the Small Towns Sanitary Ordinance. There are many towns without a satisfactory water supply or drainage, and conservancy, scavenging, and the proper disposal of refuse are inadequately carried out. The drainage and water supplies in some of the large towns are bad, and overcrowding exists.

25. **Colombo.**—As mentioned in last year's report, the water supply is insufficient, but of excellent quality. Steps have been taken to lay a larger main in Colombo where the Labugama pipes discharge, which it is said will remedy this shortage of distribution. The laying of another main pipe from Labugama will have to be undertaken in the near future, not only for present needs, but because of the recent inclusion of two large areas within Municipal limits.

The extension of the water-carriage system of sewers has made good progress during the last one and a half year. The area from those parts of Colombo that discharges into the harbour has been sewered and ready for the connections between the houses and sewers for a year, but very few connections have been made. The collection of night soil in pails, its transfer to carts in the streets, its conveyance through the city to a pitting ground on the outskirts, where it is buried, is unsatisfactory from a sanitary point of view, but it is carried out as well as such a system can be, and it cannot be changed until the water-carriage system is taken into use.

A refuse destructor is being erected by the Municipality. The scavenging has been fairly well carried out, but at times there is a good deal of dust, and there is not enough watering of streets, particularly where the roads do not lend themselves to oiling or tarring.

There is a good deal of overcrowding.

A great improvement has been made by opening a new road in Slave Island known as Short's road. Another new road to run parallel with Colpetty is under consideration, and improvements are anticipated in the markets. The plans for a Municipal Infectious Diseases Hospital are ready.

The compulsory notification of cases of consumption has been proclaimed.

Enteric fever is far too prevalent; there have been no serious outbreaks of smallpox or cholera.

Average birth- and death-rates per 1,000 of population for 1910 were 25·5 and 30·4 respectively, as against 25·27 and 30·77 in 1909.

The Rural Medical Officer of Health reports that by-laws have been framed and put in force with reference to the following:—Offensive trades, eating-houses, dairies, laundries, bakeries, butchers' stalls, fish stalls, the keeping of animals, and general by-laws. The general condition of the towns and villages outside Colombo has been much improved since this officer and his inspectors have been appointed. 264 cases of enteric fever were reported to the Rural Medical Officer of Health during the eighteen months. Every report was followed by a visit by that officer to the infected house, and the friends were instructed how to deal with the case so as to reduce the spread of this disease.

There were a few cases of chickenpox, several cases of dysentery, and only one case of cholera. There were 747 prosecutions for offences against the sanitary by-laws, and 671 convictions. The total amount of fines came to Rs. 3,031·25. The Rural Medical Officer of Health recommends that public markets should be erected in certain suburbs, and that the Small Towns Ordinance applied to Peliyagoda and Veyangoda.

26. **Kandy.**—This town was badly affected with smallpox during a part of the period under review. The drainage has been improved, particularly in the direction of Peradeniya and Katugastota, by the provision of concrete drains. The water supply has been improved by the inclusion of a new stream to the catchment area. The supply has been sufficient and of good quality. The night soil is collected in pails and conveyed in air-tight drums to the pitting ground. The scavenging was carried out satisfactorily. The dairies, laundries, slaughter-house, and eating-houses were regularly inspected. There is a good deal of overcrowding and want of sanitation in the alleys, which was brought to the notice of the authorities during the smallpox epidemic.

27. **Galle.**—This town employs a small force for carrying out anti-malarial measures. The water supply has been improved in quantity by the opening of the new works at Hiyara. The town is now well supplied. The water from this new source is coloured brown and therefore unattractive, but it is in no way injurious, and will improve as time goes on. Drainage was improved in the bazaars and Fort, and a new sewer put down in Pedlar street. The swamps on both sides of the Pattigala-ela below Talapitiya were filled in and the ela drained. The conservancy and scavenging have been carried out satisfactorily. Dairies and bakeries have been regularly inspected.

28. **Jaffna.**—It may be said that the sanitation of this town is slowly improving. During the eighteen months' period more public latrines have been provided; cesspits are being filled up and closed, and the dry-earth conservancy extended. Private compounds are cleaner, the dairies are inspected and registered, and by-laws have been passed for regulating them. The drainage is defective; a complete scheme for the removal of sewage is required. It is reported that paddy fields in the heart of the town are being converted into sites for dwelling-houses. The water supply is unsatisfactory, both as regards quality and quantity. The scavenging is satisfactorily performed. There were too many cases of smallpox, which was introduced from South India, but there was an absence of cholera, and very few cases of enteric fever.

29. **Batticaloa.**—The sanitary condition of this town is not satisfactory. Extensive low-lying areas of land in the town are covered with water for months, and there are very few masonry drains, and these are seldom flushed. The water supply is from wells, and therefore "suspicious." A scheme for a water supply is under consideration. The scavenging is fairly satisfactory. Conservancy is carried out by the bucket system in a very limited area. There are five public latrines; the excreta is buried on the western shore of the lake. Cesspits are numerous; the soil of private compounds and shores of the lake are polluted by the habits of the poorer inhabitants. There is overcrowding in the Moor quarter of the town. Laundries, bakeries, aerated water factories, slaughter-houses, and the public markets are under the Local Board and satisfactory. The milk supply is very defective. During the period of

this report there were no cases of smallpox or cholera, and only seven cases of enteric fever. There is a fair number of cases of tuberculosis. The infant mortality is high.

30. **Anuradhapura.**—Some attempt was made at anti-malarial work by the clearing of low jungle in the town and the keeping clean of the banks of irrigation channels. Weekly inspections were made by the Acting Provincial Surgeon of bazaars and tenements. The water supply is unsatisfactory. A drainage scheme is under consideration. The hospital has been improved considerably, and mosquito-proof wards for males and females have been established. The conservancy of night soil is partially carried out. The scavenging has been carried out satisfactorily.

31. **Kurunegala.**—The water supply is still unsatisfactory. The new scheme for a better supply has not been arranged yet. Owing to a drought the present supply almost failed. A pumping plant to obtain water from the tank for flushing drains is being put up. Cesspits are being filled and closed and the dry-earth system adopted in their place. As mentioned under the heading of “Malaria” in an earlier part of this report, this town is the first in Ceylon in which active measures are being undertaken to combat the periodical outbreaks of malaria. The scavenging is satisfactorily carried out. The laundries, dairies, public latrines, and public markets are inspected regularly by the sanitary officer and are well kept. The drainage in many parts of the town consists of earth drains, and therefore unsatisfactory. There is some overcrowding in parts of the town.

32. **Badulla.**—Cement concrete drains are replacing gradually the primitive type. The water supply is sufficient in quantity and of good quality. The scavenging is done satisfactorily, and there is a partial dry-earth conservancy. Some overcrowding exists. There are no dairies or laundries. The bakeries are kept in a good sanitary condition. This year the Provincial Surgeon, with the help of the Government Agent, has been very energetic in trying to reduce the outbreaks of malaria by the filling up of hollows, drainage, and the oiling of sheets of water, and free distribution of quinine. Like many other towns in Ceylon, Badulla possesses a large area of paddy fields, in which the malaria-bearing mosquito is found. It is difficult to “oil” paddy fields for two reasons: that the paddy stalks break up the film, and the water is running. Experiments carried out by the Director of the Royal Botanic Gardens at Peradeniya proved that the oil on the surface of paddy land water disappeared in twelve hours owing to the large amount of water used for irrigation. Paddy land in and near towns should be converted into dry land for some other kind of cultivation.

33. **Ratnapura.**—The water supply is insufficient, and ran dry during 1911. There was a serious outbreak of cholera (*vide supra*). The drainage is defective: a part of the town and bazaar became water-logged. Overcrowding is common. Cesspits are being replaced by the dry-earth system. The number of public latrines is insufficient. The markets are kept in a satisfactory condition. The bakeries and eating-houses are not kept well. The pollution of the river is marked owing to galas, private houses, and the hospital, which drain into it. Scavenging is fairly satisfactory.

SECTION V.—GENERAL.

34. **Medico-legal.**—During the period under review the Government Analyst completed 421 reports; 1,064 samples were examined in connection with them. The total number of judicial cases was 285, involving the examination of 745 productions. There were 127 cases of suspected poisoning. 122 samples of medicines were sent by the courts for reports. Besides criminal productions, a hundred samples were reported upon for various Departments of Government.

35. **Administrative: Hospitals, Asylums, and Dispensaries.**—The various medical institutions have been well maintained, and many structural improvements have been carried out, notably fly-proofing of kitchens and latrines and the mosquito-proofing of wards for malarial cases and of operating rooms. The building of a new out-patient department in connection with the General Hospital was commenced in September, 1909, and is now nearly finished. There were 73 hospitals and the Lunatic and Leper Asylums, 408 Government dispensaries, and 250 estate dispensaries in working.

The following hospitals were opened during the eighteen months' period:—The Lady Ridgeway Memorial for children, which contains 47 beds, and is worked under the administration of the Lady Havelock Hospital for children. A new Government hospital of 50 beds was erected at Muppane. New dispensaries were built at Nochchiyagama, Nanu-oya, Galawela, Wattegama, and Wellawaya, and one at Delft commenced. The new Government hospital at Koslanda is nearing completion. Several other new hospitals are in contemplation, for which sites are being selected and plans prepared.

36. **Nursing in Ceylon Hospitals.**—The nursing in Ceylon hospitals is undertaken by fully qualified European trained nurses, by religious sisters, and locally-trained Ceylonese young women. There are 20 European trained matrons and sisters, 36 religious sisters, 29 locally-trained matrons, 36 locally-trained nurses, and 35 pupils in training.

The European trained matrons and sisters are employed mostly at the General Hospital, Colombo, and in the Kandy hospital. The religious sisters are employed in the native wards of the General Hospital and at Kurunegala hospital. Two nursing schools for the training of local pupil nurses exist at the Lady Havelock Hospital (Miss Richardson, matron) and at the Kandy hospital (Miss Hair, matron). The training course is for two years, at the end of which time certificates are given to those who pass the examination. More nurses are required; hitherto the inducements offered to candidates have not been sufficiently attractive. His Excellency the Governor appointed a Committee to inquire into the nursing of Ceylon hospitals and to report. The latter is now under the consideration of Government. The nurses are assisted in the wards by male and female native attendants.

37. **Number of In-patients treated.**—The total number of in-patients treated in all the hospitals and asylums of the Island was 118,024. The deaths were 12,840, giving a death-rate per cent. of 10·88 of the hospital population.

Number of Out-patients treated.—At the 408 Government dispensaries 218,645 new cases were treated, who paid 3,183,567 visits.

38. **Surgical Operations.**—4,502 operations in general surgery were performed in all the hospitals, with 155 deaths, a death-rate of 3·22 per cent. Operations on the eye, not included in the above, numbered 604 among out-patients and 509 among in-patients, total 1,113 (at the Victoria Memorial Eye Hospital).

39. *General Hospital, Colombo.*—On December 31, 1909, there were 416 patients left in hospital, 34 in the paying section and 382 in the pauper section. During the eighteen months under review 20,677 cases were admitted, making a total of 21,093 cases under treatment. Of the 20,677 new admissions, 1,180 were admitted to the paying section and 19,497 to the pauper section. Of the 21,093 cases under treatment, 18,604 were discharged, 1,904 died, and 585 remained in hospital on June 30, 1911. Of the 1,904 deaths, 89 occurred in the paying section and 1,815 in the pauper section. The percentage of deaths to cases treated was 9·26 per cent. (7·3 in the paying section and 9·13 in the pauper section). The daily average number in hospital was 471·71.

The following table gives a comparison with recent years as regards the number of cases under treatment, the percentage of mortality, and the daily average number of cases in hospital in the paying and pauper sections respectively :—

1.—Paying Section.								
Year.		Cases under Treatment.		Deaths.		Mortality. Per Cent.		Daily Average in Wards.
1906	..	630	..	75	..	11·9	..	43·25
1907	..	582	..	46	..	7·9	..	31·68
1908	..	657	..	71	..	10·8	..	36·90
1909	..	733	..	41	..	5·5	..	32·22
1910 and half of 1911		1,214	..	89	..	7·3	..	40·6

2.—Pauper Section.								
1906	..	16,475	..	1,969	..	11·93	..	599·06
1907	..	10,723	..	1,387	..	12·9	..	455·74
1908	..	12,524	..	1,324	..	10·5	..	461·52
1909	..	11,993	..	1,440	..	12·05	..	450·18
1910 and half of 1911		19,879	..	1,815	..	9·13	..	431·11

The maximum number of cases in hospital on any one day was 560 on June 8, 1911, in the pauper section, and 55 on August 7, 1910, in the paying section. The minimum number of cases was 313 on April 16, 1911, in the pauper section, and 28 on February 6, 1910, in the paying section.

During a large portion of the eighteen months' period there were more patients than beds in the non-paying section of this hospital. This overcrowding was seriously increased by having to accommodate the patients with chronic complaints from Ragama (owing to the cholera outbreak), which was not relieved until temporary cadjan wards were built for them in the hospital compound. 2,452 surgical operations were performed by the surgeons of the hospital (2,126 in the pauper section and 326 in the paying section), with a total mortality of 64, or 2·2 per cent. The percentage of deaths to total treated in the pauper section was 9·13, and in the paying section the percentage of deaths to total treated was 7·3.

The receipts in the pauper section amounted to Rs. 297·45, and the expenditure (not including upkeep of buildings, equipment, medical attendance, nursing, drugs, and surgical appliances) was Rs. 161,271. The receipts in the paying section were Rs. 113,293, and the expenditure (not including medical attendance, upkeep of buildings, nurses, drugs, and surgical material) was Rs. 72,120, showing a credit balance of Rs. 41,173.

Dr. E. Garvin Mack, M.D. London, B.Sc., was appointed Third Physician on August 29, 1910.

40. *Houses of Observation for Suspected Lunatics.*—In addition to those admitted into the houses of observation at the Colombo Lunatic Asylum, the numbers admitted into these institutions at Kandy, Galle, and Jaffna were 57, 77, and 26 respectively.

41. *De Soysa Lying-in Home.*—The numbers treated in this institution go up each year. For the eighteen months' period 1,925 were admitted, of whom 57 died (2·9 per cent.). Of the deaths, 30 were due to accidents of childbirth ; of the number admitted, 1,532 were before delivery, 59 after, and 334 before the commencement of labour.

The seriousness of labour cases complicated with anchylostomiasis is shown by the fact that 8 out of 12 cases died. The percentage of infantile mortality was 3·78. It is gratifying to note that 51 patients were Muhammadans.

In addition to its useful work in rendering skilled aid to poor females during their confinements, this institution is doing good work in training midwives for practice in all parts of the Island. The accommodation for these pupils is limited, and the course of instruction is too short, but no improvement can be made until more ground is available for building purposes. The popularity of the establishment is acknowledged, but its usefulness as regards its primary object and for the training of midwives has reached its limit unless more accommodation is provided.

42. *The Lady Havelock Hospital for Women and the Lady Ridgeway Block of Children.*—Mrs. Fysh, M.B., was in charge of the above institutions until September, 1910, when she went on leave, and was subsequently invalided. She was relieved by Miss de Boer, L.R.C.P. & S., who acted as Medical Officer in charge until the present Medical Officer was appointed (Miss Anderson, M.B.). The number of patients attending at the outdoor dispensary (in association with the Lady Havelock Hospital) was 38,925. During the period under review 1,508 patients were admitted into the Lady Havelock Hospital, with a death-rate of 6·42 per cent. The number of Muhammadans treated was 52. There were 122 surgical operations performed, with 9 deaths.

The Lady Ridgeway block was opened in September, 1910, and from that date to June 30, 1911, 585 children were admitted, of whom 102 died, a mortality of 17·43 per cent. This high death-rate is due to the fact that parents will not bring in the children early in the disease ; often they are dying when admitted, and frequently cases are treated for weeks by vedaralas before seeking admission. This institution is very popular, the number of applicants seeking admission often exceed the number of vacant beds.

43. *The Victoria Memorial Eye Hospital and Grenier Outdoor Dispensary.*—At the dispensary 12,787 new cases (eye and ear) were treated, among which were 1,201 cases of injury. 190 persons were examined as to their fitness for employment in Government Departments, *e.g.*, the Railway. 604 operations were performed.

At the Victoria Memorial Eye Hospital 1,003 in-patients were treated. 509 major operations were performed, 277 of which were for cataract; 3·24 of these were failures. To show the popularity of this institution, patients came from every Province in this Island and from South India. The accommodation provided has been found insufficient, and a new male ward and an enlargement of the outdoor dispensary are pressing necessities. Owing to the generosity of Mr. Walter de Soysa, who has given Rs. 50,000 for the extension of buildings for the treatment of eye diseases in Colombo, Galle, and Kandy, a start will be made soon to supply these wants.

44. *Police Hospital, Colombo.*—The total number of patients was 1,276, of those 122 were jail officers. Of those admitted, 4 died, 1 each from dysentery, bronchitis, pneumonia, and pericarditis; only one case of enteric fever was admitted. The average daily sick in hospital was 14·72.

45. *Branch Hospitals for Women.*—At Colombo 545 were treated for venereal diseases, with one death. At Galle 164 were treated.

46. *Jail Hospitals and Sick Prisoners.*—During the eighteen months' period 21,749 prisoners were admitted into the different jails of the Island. The average daily strength of prisoners was 3,108·12, the number treated in jail hospitals was 9,991, the total number of deaths was 347.

The following table shows the number of admissions, number of deaths, average strength, and death-rate to admissions to jail hospitals during the past five years :—

		Admission to Hospitals.		Number of Deaths.		Average Daily Strength of Prisoners.		Death-rate per Cent. to Admissions.
1906	4,776	..	110	..	3,153·26	.. 2·30
1907	5,617	..	113	..	3,334·88	.. 2·01
1908	5,667	..	205	..	3,371·97	.. 3·61
1909	8,319	..	346	..	3,348·21	.. 4·15
1910-11	9,829	..	350	..	3,108·12	.. 3·56

The chief causes of sickness and deaths were as follows :—3,984 cases of diarrhoea, with 133 deaths; 960 cases of dysentery, with 63 deaths; 1,213 cases of malaria, with 15 deaths; 18 cases of enteric fever, with 6 deaths; 144 cases of injury, with 2 deaths. All other diseases totalled 3,672, with 128 deaths.

Colombo Jails.—

		Average Daily Strength.		Average Daily Sick.		Per Cent. Sick to Strength.		Total Deaths.		Per Cent. Deaths to Strength.
Welikada	..	796·06	..	38·28	..	4·81	..	89	..	·020
Mutwal	..	300·47	..	27·52	..	9·16	..	57	..	·035
Hulftsdorp	..	121·08	..	2·45	..	2·02	..	6	..	·009
Mahara	..	584·36	..	43·78	..	7·53	..	87	..	·028

Diets.—In August, 1910, 16 ounces of raw rice was substituted for 16 ounces of bread in No. 1 penal diet in the Colombo prisons.

47. *Kanatta Infectious Diseases Hospital.*—1,646 cases of infectious diseases were treated at the hospital during the eighteen months' period. The diseases included :—

		Cases.		Deaths.
Cholera	9	3
Smallpox	105	22
Chickenpox	1,141	1
Measles	133	2
Acute diarrhoea	2	2
Mumps	73	—
Whooping cough	7	—
Beri-beri	10	—
Diphtheria	4	1
Other cases, including those under observation	162	1

48. *Victoria Home for Incurables.*—At this institution 66 remained on December 31, 1909, and 12 were admitted during the period under review, making a total of 78 cases, of whom 1 was discharged and 3 died, 74 remained on June 30, 1911.

49. *Bacteriological Institute and Clinic for Tropical Diseases.*—The total number of specimens sent for bacteriological examination was over 3,000, including the Clinic and Seamen's Ward, General Hospital. The fees collected amounted to Rs. 1,029. A new clinic is an urgent need, the present building being unsuitable. Research work was carried out in the following subjects by Dr. Castellani :—

- (1) Dhoby itch and its fungi (five new species).
- (2) The hyphomycetes of *Tinea imbricata*; their growth on artificial media and experimental reproduction of the disease.
- (3) Tropical bronchomycosis.
- (4) Anchylostomiasis fever.
- (5) Cases of fever due to *Bacillus Asiaticus*.
- (6) Observations on some new intestinal bacteria.
- (7) A peculiar trychomycosis.
- (8) The treatment of yaws.
- (9) Vaccination with live vaccines.

The details of the investigations will be found in the reports to the Advisory Committee of the Tropical Diseases Research Fund.

50. *Total Hospital Deaths.*—The total deaths were 12,840. A statement showing the death-rate per cent. in the various hospitals and asylums (exeluding the jails) is given below, the death-rates among mixed races and immigrant Indians being shown separately :—

Hospitals.	Mixed Races.		Indians.		Total.
Civil	8·07	..	17·47	..	10·08
Field	4·62	..	11·54	..	5·55
Immigrant	3·65	..	2·45	..	3·24
District	7·75	..	19·87	..	16·18
Asylums	8·33	..	10·33	..	8·58
Other hospitals	·95	..	1·31	..	1·02
Total ..		7·46	17·98		10·88

51. *Hospital Accommodation.*—This was generally sufficient. Some of the hospitals in the planting districts were overcrowded. Water for drinking purposes is, as a rule, filtered before use. Separate bathrooms are provided for males and females, but patients who ean help themselves prefer to bathe in streams when such are near. The conservaney of the latrines is entirely on the dry-earth system.

52. *Inspection.*—The hospitals and dispensaries were regularly inspected by myself and the Provincieal Surgeons of the respective Provinces. The number of these visits of inspection is given in the return of each institution. The books were produced when called for and generally were found complete and kept up to date. The reports of these inspections were forwarded to Government when necessary.

53. *Food Supply.*—The provisions for the various hospitals were supplied by contractors approved by Government. The system works satisfactorily. The food is inspected by the medical officers of the hospitals before it is served to patients, and any samples not approved are rejected. Contractors offering inferior samples are fined.

54. *The Ragama Camp.*—The total number of persons that passed through the camp during the period under review was 142,045 ; of these, 64,161 were from cholera-infeeted areas in South India, 6,244 from smallpox-infeeted districts, and 648 from plague-infeeted parts, and the others were Sepoys of the native infantry regiment stationed in Colombo, who returned from their homes in India. 46,862 persons were vaceinated at the camp.

The camp was free from infeetious diseases till May, 1910. From May 5, 1910, to September 10, 1910, there were 11 eases of cholera, with 10 deaths, and 1 fatal case of aeute diarrhœa. In 1911 there were 2 fatal cases of cholera and 1 ease of aeute diarrhœa up to May 1. A severe outbreak of eholera occurred in May, 1911, the first case being on May 3. The disease spread rapidly, and the total number of eases of the outbreak was 327, with 214 deaths. The outbreak lasted from May 3, 1911, to June 14, 1911. One ease of smallpox only occurred at the camp during the eighteen months' period.

55. *Medical College.*—The College eonsists of leecture hall, students' library, laboratories for ehemistry, physiology, pathology, and biology, a dissecting room, offiees, photographie rooms, museum, the Colonial Medical Library, and a separate building for lady students. There were 243 students in attendanee at the end of June last, of whom 161 were registered medical students and 82 apothecary students. Thirteen students qualified in medicine and surgery ; 19 apothecary students passed out.

The number of students entering and passing out of the College is shown in the following table :—

Examination.	Number of Candidates entering.		Number passed.		Percentage of Passes.
Medical Preliminary	81	..	34	..	42
First Professional	126	..	53	..	42
Second Professional	40	..	21	..	52·5
Third Professional, Part I. ..	22	..	16	..	72·72
Third Professional, Part II. ..	26	..	13	..	50
Apothecaries' Entrance	115	..	67	..	58·26
First Apothecaries	44	..	20	..	45·45
Second Apothecaries	29	..	19	..	65·5

The work at the College and the number of students have outgrown the aecommodation ; the rebuilding of portions of the premises is sanctioned. The fees eollected during the period amounted to Rs. 55,720, and the nett cost of the institution to the Colony was Rs. 33,886·69. The nett eost to the Government for the period for each student was about Rs. 139.

56. *The Medical Council.*—Mectings were held regularly. Thirty-five persons were registered.

57. *The Civil Medical Stores.*—The total cost of drugs, ehemicals, and instruments during the period was Rs. 305,888·19. 140,592 ounces of quinine were issued, which cost Rs. 93,133. The cost of repairing surgical instruments was Rs. 919·54. The cost of transport was Rs. 10,620·07. The sale of medicines to Government Departments and others was to the value of Rs. 4,656·71, and the sale of medicines, &c., to estates realized Rs. 3,279·19. The sale of unserviceable artieles realized Rs. 718·22, and the value of instruments sold, lost, and paid for by officers of the Department amounted to Rs. 2,541·77. The total eost of drugs, instruments, stationery, printing and binding, transport, and other incidental expenses amounted to Rs. 341,893·15, and the total income realized by sale of drugs, unserviceable articles, &c., amounted to Rs. 11,195·89.

58. *Strength of the Medical Department.*—The following was the strength of the Medical Department during the period :—1 Principal Civil Medical Officer, 1 Assistant Principle Civil Medical Officer, 1 Registrar of the Ceylon Medical College, 1 Director of the De Soysa Baeteriological Institute, 1 Assistant Baeteriologist, 1 Professor of Chemistry, 1 Professor of Physics, 1 Government Analyst, 9 Provincieal Surgeons, 1 Superintendent of the General Hospital, Colombo, 1 Superintendent, Leper Asylum, Hendala, 1 Superintendent, Lunatie Asylum, Colombo, 3 Medical Women, 30 Medical Officers, Grade I., including 1 Medical Woman, 37 Medical Officers, Grade II., including 1 Medical Woman, 66 Medical Officers, Grade III., including 1 Medical Woman, 6 Health Officers, 246 Apothecaries, 1 Chief Storekeeper, 9 Inspectors of Vaccination, and 131 Vaccinators.

59. *Changes in the Department.*—Dr. C. T. Griffin retired from the Public Service on April 14, 1911, after a period of over ten years' service as Assistant Principal Civil Medical Officer, and was succeeded by Dr. G. J. Rutherford from the West African Medical Service. Dr. E. P. Aserappa, Medical Officer, Grade I., was appointed Office Assistant to the Principal Civil Medical Officer in September, 1910. Dr. C. de Vos, Medical Officer, Grade I., was appointed Acting Provincial Surgeon, North-Central Province, on August 6, 1910. Dr. C. Heynsberg, Medical Officer, Grade I., died on March 26, 1911.

60. The following statement shows approximately the expenditure and receipts, exclusive of Estates Branch, for the years 1909 and 1910-11 :—

Expenditure.	1909.		1910-11.	
	Rs.	c.	Rs.	c.
Personal Emoluments ..	716,631	13	1,016,682	14
Other Charges ..	92,487	46	1,023,723	82
Hospitals and Dispensaries ..	1,043,167	12	1,117,141	81
Total ..	1,135,654	58	2,140,865	63
Grand Total ..	1,852,285	71	3,157,547	77
Credits.				
Amounts due by paying patients in hospitals ..	82,318	84	135,413	70
Collections at dispensaries ..	27,348	36	42,534	91
Cost of medicines issued to Estates Branch institutions ..	139,128	89	181,637	52
Sale of medicines and superfluous articles and miscellaneous recoveries ..	45,529	85*	49,802	93
Lunatic Asylum paying patients ..	6,712	7	9,719	23
Total ..	301,038	1	419,108	29
Nett Expenditure ..	1,551,247	70	2,738,439	48

* Includes Medical College fees.

ESTATES BRANCH.

61. During the period there were 2,132 estates scheduled to 35 districts, with 21 district hospitals and 29 dispensaries and 18 civil hospitals and dispensaries, to attend to the medical wants of which the following medical officers were employed :—Medical Officers First Grade 4, Medical Officers Second Grade 11, Medical Officers Third Grade 19, and 68 Apothecaries.

62. During the period 26,854 estate labourers were treated in the district hospitals and civil constituted district hospitals. Of these, 5,448 died—a death-rate of 20·29 per cent. Of the mixed races, 24,861 were treated, of whom 2,271 died—a death-rate of 9·13 per cent.

63. In the civil hospitals, worked partly as district hospitals, the death-rate of estate labourers was 21·31 per cent., whilst in the district hospitals it was 19·87 per cent. The highest death-rate (39·07) among the estate labourers occurred in the civil hospital at Ratnapura, and the lowest (6·35) in the field hospital at Alutnuwara. The admissions into the former were 1,464 and into the latter 173.

64. The total number of days the estate labourers stayed in hospital was 667,587, an average of 24·85 days each ; of these, 413,812 were paid for by estates, the rest being charged to the fund. The total number of days the mixed races stayed in district and civil hospitals was 326,372, an average of 13·12 days.

65. The total number of estate labourers treated at the outdoor dispensaries was 111,575. The total number of estate labourers treated on estates was 59,237.

66. The total number of births reported from estates was 26,553, of which 12,942 were males, 12,455 were females, and 1,156 were stillbirths.

67. The number of deaths reported from estates was 21,258, of whom 10,264 were males, 10,987 were females, and in 7 cases the sex was not stated.

68. *Medical Aid.* — The expenditure under the Medical Aid Ordinance amounted to Rs. 1,084,927·42, and the receipts to Rs. 611,633·48, leaving a deficit of Rs. 473,293·94 :—

Statement of Medical Aid Receipts and Expenditure in the Civil and District Hospitals during 1910-11 showing the Deficit for the Period.

RECEIPTS.							
		Amount.	Total.			Amount.	Total.
		Rs.	c.			Rs.	c.
<i>District Hospitals.</i>							
1. Diets payable by estates at 30 cents per diem ..	90,594	30		5. Sale of drugs, unserviceable articles, garden produce, rent, &c. ..	10,210	59	
2. Diets payable by Government for "others" at 50 cents per diem ..	83,247	0		6. Amount due for maintenance of "others" ..	656	9	
3. (a) Medicines sold and prescriptions compounded at dispensaries ..	22,045	6					306,621 14
(b) Collections at dispensaries ..	5,144	6		<i>Civil Hospitals.</i>			
(c) Medicines used by "others" in hospitals ..	29,905	12		1. Due by estates for labourers at 30 cents per diem ..	33,549	30	
(d) Medicines used by "others" in dispensaries ..	26,701	42		2. Due by estates for visits ..	8,635	50	
4. Due by estates for visits ..	38,117	50					42,184 80
							348,805 94
				Export duty ..	—		262,827 54
				Deficit ..	—		473,293 94
						Total ..	1,084,927 42

EXPENDITURE.					
	Amount.	Total.		Amount.	Total.
	Rs. c.	Rs. c.		Rs. c.	Rs. c.
<i>District Hospitals.</i>					
1. Diets for estate labourers and "others" ..	236,385 9		9. Wages of attendants, &c. ..	53,765 62	
2. Medicines supplied from Civil Medical Stores ..	60,966 28		10. Contingencies ..	12,674 5	
3. Salaries and allowances of medical officers, apothecaries, nurses, clerical staff, &c. ..	233,407 96		11. Printing ..	3,226 92	
4. Travelling expenses of medical officers, apothecaries, nurses, clerical staff, &c. ..	65,208 24		12. Medicines supplied to district dispensaries ..	38,698 34	
5. Construction, maintenance, and repairs to buildings ..	86,327 22				843,336 7
6. Rent of outdoor dispensaries and hospitals ..	13,460 60		<i>Civil Hospitals.</i>		
7. Transport of medicines ..	9,423 38		1. Diets for estate labourers ..	80,966 85	
8. Equipment ..	29,792 37		2. Medicines used by estate labourers in—		
			(a) Hospitals ..	17,569 72	
			(b) Dispensaries ..	1,694 51	
					100,231 8
			Medicines supplied to estate dispensaries ..	—	141,360 27
			Total ..	1,084,927 42	

ALLAN PERRY,
Principal Civil Medical Officer and
Inspector-General of Hospitals.

Colombo, December 22, 1911.

APPENDIX.

I.—THE OPIUM QUESTION.

THE question of regulating the traffic in opium in this Island is intimately associated with the name of Mr. John Ferguson, C.M.G. A Committee consisting of the Hon. Messrs. S. C. Obeyesekere, F. C. Loos, and J. Ferguson, C.M.G., and Mr. R. Morison, J.P., and the Principal Civil Medical Officer (Chairman), was appointed by Government in June, 1907, "to inquire into and report on the importation, sale, and consumption of opium in Ceylon, and to state what changes were desirable in the Ordinances and regulations affecting the importation and sale of the drug." The recommendations of that Committee were—

- (a) That the present system of renting and licensing be abandoned.
- (b) That all opium shops be closed on the expiration of existing licenses.
- (c) That the importation, distribution, and sale of the crude drug be made a Government monopoly.
- (d) That for every opium shop closed the nearest Government dispensary be made available for the distribution of the drug to all habitual adult users of the same who may come forward to register their names for a certain quantity to be periodically given out and paid for in cash, and that suitable remuneration be given to the dispensers for the extra work and responsibility thus cast upon them.
- (e) That the use of the drug, except for medical purposes, should be entirely prohibited after a definite period.
- (f) That a system of careful inspection be introduced by the appointment of special officers under the direction of the Principal Civil Medical Officer.

This was followed by the appointment of a Commission in September, 1909, consisting of the Hon. Messrs. L. W. Booth, S. C. Obeyesekere, W. G. van Dort, M.D., Drs. A. J. Chalmers and H. M. Fernando, and Solomon Seneviratne, Gate Mudaliyar, with the Hon. Mr. A. G. Lascelles, K.C. (Chairman), "to inquire into and report on the question of introducing a system of registration of vedaralas who deal in opium in this country; and in the event of their being registered, whether the opium supplied to them should be pure or mixed with aloes or some other drug." The recommendations of this Commission were—

- (a) The registration of vedaralas should be entrusted to Provincial Boards consisting of the Government Agents as Chairmen and such other members as the Governor may appoint.
- (b) Only such vedaralas should be registered as in the judgment of the Board have gone through a sufficient course of training, are of good character, and have an extensive and more than merely local practice.
- (c) Similar Boards, if thought desirable, might be appointed in revenue districts with the Assistant Government Agent as Chairman.
- (d) In order to secure uniformity the Governor should fix the maximum number of registered vedaralas to be allowed for each Province or revenue district. To enable the Governor to do this in the first instance each Government Agent, after the Board has received and considered applications for registration as vedaralas, should submit a report on the applications to the Governor.
- (e) On the registration of a vedarala, the maximum amount of opium which he will be entitled to obtain annually, and the depôt from which the opium will be obtainable, should be recorded, no vedarala being entitled to obtain opium from any source except the depôt in connection with which he is registered. Precautions must, of course, be taken that no vedarala shall be registered at more than one depôt.

- (f) With regard to the quantity of opium for which vedaralas should be registered, we think that the maximum should be fixed by the Governor from time to time. We believe that 8 oz. a year would be sufficient, if the Government Agent were empowered to authorize the issue of larger amounts for limited periods in special cases or in seasons when there is an outbreak of any sickness for the treatment of which opium is necessary.
- (g) Opium should be issued only to the registered vedarala in person.
- (h) The vedarala, when registered, should be required to pay a registration fee to cover the cost of administration, and to enter into security to issue opium only for medicinal purposes.
- (i) The Government Agents should have power to cancel registrations, subject to an appeal to the Governor.
- (j) The price at which opium will be issued from the Government dépôt should be fixed from time to time by the Governor, and opium should be issued only against cash payment.
- (k) Subordinate provisions would be required as regards the issue of certificates of registration, notification of change of residence, the books to be kept, and other matters of detail.

The result of these two inquiries was the passing of an enactment cited as “The Opium Ordinance, 1910,” in which opium was made a Government monopoly, with Government opium dépôts in various parts of this Island for the distribution of the drug to registered consumers and registered vedaralas. The Principal Civil Medical Officer was appointed to control and supervise this new branch of the Medical Department. Existing Government dispensaries were utilized for the majority of the dépôts; in certain places, notably Colombo, houses were rented for this purpose. Fifty-eight opium dépôts were established and equipped for the sale of opium by October 1, 1910, since which date the work has gone along smoothly. At the very busy dépôts specially trained sellers have been appointed. A staff of examining clerks visit the dépôts regularly and inspect the books.

A statement of opium sold and the amount realized during the year October 1, 1910, to September 30, 1911, is appended:—

Statement of Opium sold and the Amount realized during the Year October 1, 1910,
to September 30, 1911.

During the Four Quarters ended	Eating Opium.			Smoking Opium.			Total realized.	
	Quantity sold. Grains.	Amount realized. Rs. c.		Quantity sold. Grains.	Amount realized. Rs. c.			
December 31, 1910 ..	13,343,433	100,960 71	..	2,994,398	29,977 34	..	130,938	5
March 31, 1911 ..	14,893,067	112,084 99	..	3,147,031	31,456 26	..	143,541	25
June 30, 1911 ..	15,932,828	119,781 17	..	3,040,191	30,405 99	..	150,187	16
September 30, 1911 ..	16,567,231	124,453 53	..	3,024,954	30,256 81	..	154,710	34
Total for the Year ..	60,736,559	457,280 40		12,206,574	122,096 40		579,376	80

Colombo, December 22, 1911.

ALLAN PERRY,
Principal Civil Medical Officer and
Inspector-General of Hospitals.

II.—REPORT ON THE LUNATIC ASYLUM AND THE HOUSE OF OBSERVATION FOR 1910-11.

I HAVE the honour to submit the report on this institution (Asylum and House of Observation) for the eighteen months, January, 1910, to June, 1911, inclusive.

2. As usual, I take the statistics of the Asylum first.

A.—ASYLUM.

3. At the end of 1909 the number of patients remaining in the Asylum was 586 (males 357, females 229).

4. During the eighteen months under review 287 persons (males 186, females 101) were admitted.

5. The total number under treatment was thus 873 (males 543, females 330).

6. The number discharged was 126 (males 80, females 46).

7. Ninety-eight patients (males 62, females 36) died.

8. The number remaining in the Asylum on June 30, 1911, was therefore 649 (males 401, females 248), an increase of 63 (males 44, females 19) during the eighteen months.

9. The average daily number resident during the time in question was 616·02 (males 383·05, females 232·97), an increase of 34·11 in the total number as compared with that of 1909. The increase in the average number of males was 22·90, in that of females 11·20. Most of it occurred in the later months of the period.

10. The largest number of males resident in the Asylum at any one time was 414, of females 254, and of both together 664. These maxima exceed those of 1909 by 39 in the case of males, by 21 in females, and by 63 in both taken together.

11. The smallest numbers simultaneously resident were, males 354, females 206, both together 571. These figures exceed those of 1909 by 4 in males, by 2 in females, and by 11 in the total number.

12. The difference between the maximum and the minimum total (nearly 100) is remarkable.

B.—HOUSE OF OBSERVATION.

13. At the beginning of 1910 14 persons (8 males, 6 females) remained in the House of Observation.

14. During the eighteen months under review 278 persons (506 cases) were admitted; of these, 200 (358 cases) were males and 78 (148 cases) were females.

15. The total number treated was consequently 292 (males 208, females 84).

16. Of these, 149 (males 95, females 54) were transferred to the Asylum, and 122 (males 100, females 22) were discharged without passing into the Asylum.

17. Six persons (4 males, 2 females) died.
18. The number remaining on June 30 was thus 15 (males 9, females 6).
19. The average daily number resident in the House of Observation was 11·76 (males 7·97, females 3·79).
20. The largest total number was 23 ; the largest number of males 19, and of females 9.
21. The smallest total number was 2 (males 2, females 0).

C.—THE WHOLE INSTITUTION.

22. As the Asylum and the House of Observation are in many respects one institution so far as administration is concerned, it is convenient to exhibit in tabular form the figures for the two combined :—

			Males.		Females.		Total.
Remained	..	..	365	..	235	..	600
Admitted	..	..	386	..	179	..	565
Total treated			751		414		1,165
Transferred from House of Observation							
to Asylum	..	..	95	..	54	..	149
Discharged	..	..	180	..	68	..	248
Died	..	..	66	..	38	..	104
Remaining at June 30, 1911	..	..	410	..	254	..	664
Increase	..	..	45	..	19	..	64

23. The average daily number of residents in the whole institution was 627·81 (males 391·02, females 236·78), an increase of about 35 over the corresponding figure for 1909. The increase in the male average number was 23·86, and in the female 11·07.
24. The greatest number simultaneously resident was 674 (62 more than in 1909), while the largest number of males was 423 (43 more than in 1909), and of females 261 (25 more than in 1909).

Admissions.

25. *Asylum*.—The cases admitted were of the usual types, and call for no special comment regarding their form. I have shown in tabular form in the returns already sent the number of cases belonging to each of the heads of the classification adopted here. From that table it will be seen that more than half the cases admitted were maniacal in type, and less than one-third melancholic. Eight were classed under “ Epileptic Insanity,” and the relatively large number of 27 did not appear to be insane. This appears to me a quite unreasonable proportion, and it seems to argue an undue facility of conviction on the part of some judicial officers as to mental aberration on the part of persons brought before them and alleged to be insane. Taken in conjunction with the fact that only about half the cases sent to the House of Observation (which is, so far as this point is concerned, practically the same as the Asylum) need to be transferred to the Asylum, the incarceration of 27 apparently sane people here is distinctly disquieting.
26. The change in the duration of the period reported on from twelve months to eighteen months renders statistical comparisons with previous years difficult and comparatively valueless. One point seems sufficiently clear, however; the rate of increase of the Asylum population is itself accelerating. I do not think this is entirely due to an increase in insanity in the inhabitants of the Island generally : part may be due to that, but, as I have previously pointed out, the number of insane persons under treatment in the Asylum is a very small one in relation to the total population, and it seems likely that as communication becomes easier cases hitherto retained in remote districts will more and more be sent to the Asylum. Since the judicial interpretation of the term “ insanity ” seems also to be widening, that factor has also to be taken into account in estimating the chances of future increase in the number to be provided for.

27. *House of Observation*.—The work of admitting, examining, observing, and reporting on 278 persons in the House of Observation alone is very arduous, and the necessity for a separation of that institution from the Asylum becomes greater day by day.

Discharges.

28. *Asylum*.—The total number of persons discharged was 126. Deducting one-third on account of the extra six months included in the period to which this report refers, the remainder (84) is slightly below the average for the preceding ten years, but the number discharged recovered, less one-third, is rather over the average for those ten years. The category of the “ Not improved ” is unduly magnified by the “ Not insane ” cases to which I have already referred.
29. The ratio of recoveries to admissions was, in males 27·41 per cent., in females 40·59 per cent., and in both together 32·05 per cent. The ratio in women is slightly over that of the previous decade, the other ratios are slightly under the corresponding figures for that decade.

Deaths.

30. *Asylum*.—The death-rate approximated very closely to the average for the preceding ten years. The ratio to the total number treated was 11·22 per cent. in men and women taken together ; in males alone it was 11·41 per cent., and in females 10·90 per cent.
31. Five of the 98 patients who died had been resident here between twenty and thirty years, and 2 (both men) from thirty to forty years. On the other hand, 16 (11 men, 5 women) died within three months of their admission. Most of these were persons labouring under incurable disease, or much exhausted by other causes at the time they were brought here.
32. It is of little use to attempt to analyse the table of causes of death, because in very many cases disease of several different organs existed, and it was often difficult to determine the probable share of each in the fatal result. I have little doubt, however, that if the institution were not so overcrowded there would be less phthisis. Seven of the deaths were due mainly to old age. No case of suicide occurred,

but one patient died of an accident that might have been supposed trivial; she was an enfeebled woman, who fell from her bed, and in falling struck her head forcibly against the cement floor of her room, sustaining a concussion of the brain, from which she did not recover. I have unfortunately to record another fatal accident. A man with brain degeneration had a piece of chicken impacted in his pharynx while he was having breakfast, and although medical aid was obtained almost immediately and the obstruction removed, it was found impossible to resuscitate him, although artificial respiration and the administration of stimulants and restoratives were kept up for about an hour. The enfeebled condition of his heart and brain greatly diminished his chances in such an emergency. Accidents of this kind cannot be entirely prevented, but they have been very rare here; the one now referred to being the only one that has happened during my period of charge.

33. Enteric fever was the cause of death in one case. The patient was a young man who had been here about three months. The source of infection could not be discovered.

34. *House of Observation.*—Six persons (4 males, 2 females) died in the House of Observation. Most of them were the subjects of brain disease, either alone or in combination with some other malady.

Administration.

35. In view of what I have already said regarding the continued increase in the number of patients, it must be evident that the overcrowding to which I have so often referred in previous reports must become worse and worse as time goes on. I think it is only necessary now to say that about 750 people have to be accommodated (?) in a building intended for little over 400, and that the floor space available per bed is in some cases less than half the area prescribed by Government as the minimum permissible, while in most of the dormitories it is not as much as two-thirds of that amount. The day room accommodation and, still more, the latrine and lavatory accommodation are correspondingly inadequate, and in view of the fact that till very lately our water supply was both irregular and insufficient, and that consequently it was hardly possible to keep the wards clean, it is a matter for surprise and thankfulness that the results as regards the general health of the institution were not worse. I am glad to say that since the old 4-inch main (which had been reduced by incrustation to a much smaller calibre) was replaced by a 6-inch pipe we have what may fairly be termed a good water supply.

36. As the present building is so constructed that the male and female divisions cannot be effectively separated, and as there are now enough male patients to fill it, apart from the attendants, who have also to be provided for, it appears to me that the best course would be to use it as a male asylum only, and to construct a female asylum elsewhere. Even then there would be no provision for the future of the male division so far as nominal accommodation is concerned, but in certain places verandah space could be utilized to a greater extent than is possible at present, and I think the building would serve reasonably well for a considerable time to come.

37. Part of the structure has been “fly-proofed,” and certain other parts are about to be done. Unfortunately the plan of the building is rather badly suited for this purpose.

38. Last year I remarked on the fact that even here, where patients have to live in such close association, sporadic cases of such a disease as smallpox may and do occur without involving an epidemic. One case of smallpox occurred here in the time now under consideration, but I am glad to say it remained a solitary one. Eighty-three cases of chickenpox occurred, and were sent for treatment to the Infectious Diseases Hospital.

Expenditure.

39. As, under the new system of accounting, the votes for “Fixed Charges” and “Other Charges” do not cover quite the same periods, it is difficult to give exact figures relating to surpluses and deficits. I will only say here that the amounts voted for diets, equipment, and wages were fully sufficient, and the only deficit was under the heading “Contingencies.” This was more than counterbalanced by the savings under other headings, and there was a credit balance on the financial operations of the institution as a whole during the eighteen months under review.

Industrial Department.

40. This has now been taken over by Government, and it ceased to exist as a separate entity on June 30, 1911. At its absorption its funds exceeded Rs. 14,000.

Changes in the Staff.

41. I regret to report that these have been numerous.

42. As regards the medical staff, I was absent on leave from May to November, 1910, and Dr. W. Wijegoonewardena, the Senior Assistant Medical Officer, acted for me. I desire here to record my very high appreciation of the care and ability with which he discharged the duties of the office, and to express my hearty thanks for his readiness to help in an emergency.

43. Shortly after my return Dr. Wijegoonewardena was transferred to Avisawella, from which place Dr. Simon Silva came to replace him. Dr. Poulier, who had been Junior Assistant Medical Officer, left for Kandy in April, and was replaced by Dr. E. C. Spaar.

44. The matron, Miss R. Ferdinands, left in June, 1910, and was succeeded by Miss L. Weerapass, who had been nurse and assistant matron previously. In November she was sent to Rakwana, and her place here was taken by Miss M. Schokman.

45. Mr. C. F. Keegel, who had held the appointment of steward, left in February, 1910, and Mr. J. D. Rozairo, who had acted as his assistant, and whose nominal appointment was that of second overseer, was promoted to his place.

46. At the beginning of 1910 the post of head overseer was vacant through the retirement of Mr. F. Serpanchy, Mr. T. P. de Costa was appointed his successor.

47. Several attendants were dismissed for breaches of the regulations and for offences of various kinds, and a number resigned. I experience increasing difficulty in obtaining attendants, especially female attendants, of a suitable kind.

Colombo, July 20, 1911.

J. B. SPENCE,
Medical Superintendent.